We claim:

1. A monitoring system for a lift installation having at least one of a shaft door or cage door to be monitored, comprising: at least one sensor means for monitoring the state of the monitored door and an evaluating system connected to the sensor means for evaluating signals made available by the sensor means for evaluating signals of the sensor means at short intervals in time in order to detect the state of the monitored door and changes over time of a signal characteristic of the signals of the sensor means.

2. The monitoring system according to claim 1, wherein the evaluating system includes means for detecting at least one of the following states:

i. recognition and localization of a fault,
ii. sensor means defect or failure,
iii. sensor means wear,
iv. faulty manipulation of the shaft door in a region in which the sensor means is disposed,
v. maintenance needed, or
vi. maintenance recommended.

3. The monitoring system according to claim 1 or 2, wherein an evaluating system is present for each story.

4. The monitoring system according to claim 1 or 2, wherein an evaluating system is present for several stories in common.

5. The monitoring system according to claim 1 or 2, wherein the evaluating system is integrated in a bus node of a data bus.

6. The monitoring system according to claim 1 or 2, wherein the evaluating system has a local processor in order to undertake evaluation of the signals of the sensor means.

7. Monitoring system according to claim 1 or 2, wherein the evaluating system also processes signals of an incremental position transmitter at a door drive.

8. The monitoring system according to claim 1 or 2, wherein the evaluating system includes means to detect at least one of changes over time of a signal characteristic in order to recognize abnormal bounce behavior of the sensor means; abnormal dynamic signal courses such as bounce behavior of the sensor means; and abnormal static signal states at the sensor means.

9. The monitoring system according to claim 1 or 2, wherein in that the sensor means comprises two or more redundant sensors.

10. The monitoring system according to claim 1 or 2, wherein the sensor means each comprise two sensors which are arranged in a region of at least on of the shaft door and cage door in such a manner that during closing of the respective door initially one of the two sensors and then, displaced in time, the second of the two sensors makes available a signal.

11. The monitoring system according to claim 8, wherein the evaluating system includes means for evaluating the signals and the signal characteristic so as to be able to trigger one or more of the following predefined reactions:

- localization of a fault;
- triggering of a service call;
- storage of diagnostic information; or
- upon recognition of a staying open of a shaft door, stopping lift cage or executing a situation-dependent reaction.

12. The monitoring system according to claim 10 wherein at least one evaluating system is present for each story.

13. The monitoring system according to claim 10, wherein an evaluating system is present for several stories in common.

13. The monitoring system according to claim 10, wherein an evaluating system is present for several stories in common.